

2814

PATENT  
Attorney Reference No. 6047-55230

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gilton et al.

Art Unit: 2814

Application No. 09/579,345

Filed: May 25, 2000

For: SEMICONDUCTOR FABRICATION METHODS  
AND APPARATUS

Examiner: S. Rao

Date: February 12, 2001

## CERTIFICATE OF MAILING

I hereby certify that this paper and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service on February 12, 2001 as First Class Mail in an envelope addressed to: BOX NON-FEE AMENDMENT, COMMISSIONER FOR PATENTS, WASHINGTON, D.C., 20231.

*Jeffrey B. Haendler*  
Jeffrey B. Haendler, Esq.  
Attorney for Applicant

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## TRANSMITTAL LETTER

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Enclosed is an Amendment for the above application. The fee has been calculated as shown below.

CLAIMS AS AMENDED					
For	No. after amendment	No. paid for previously	Present Extra	Rate	Fee
Total Claims	38	- 38*	= 0	\$18.00	\$ 0.00
Indep. Claims	12	12**	= 0	\$80.00	\$ 0.00
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT					\$ 0.00

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No additional fee is required.



Please charge any additional fees that may be required in connection with filing this amendment and any extension of time, or credit any overpayment, to Deposit Account No. 02-4550. A copy of this sheet is enclosed.

JBH:jjv 02/12/01 6047-55230



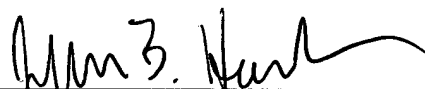
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☒ Please return the enclosed postcard to confirm that the items listed above have been received.

Respectfully submitted,

KLARQUIST SPARKMAN CAMPBELL  
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By

  
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Handwritten notes and signatures in the top right corner, including a signature that appears to be "Jeffrey B. Haendler" and some illegible scribbles.

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In re Application of: Gilton et al.

Art Unit: 2814

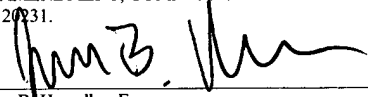
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For: SEMICONDUCTOR FABRICATION  
METHODS AND APPARATUS

  
Jeffrey B. Haendler, Esq.  
Attorney for Applicant

Examiner: S. Rao

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**RESPONSE**

This is in response to the Office Action dated December 20, 2000.

**REMARKS**

Claims 1-38 are pending in the application. Due to a restriction requirement, claims 1-13, 16-19, 26-30, 32-36 and 38 have been withdrawn from consideration. Reconsideration of claim 14-15, 20-25, 31 and 37 is respectfully requested.

***I. Restriction Requirement***

During a telephone interview between Lisa M. Caldwell and the Examiner on December 12, 2000, a provisional election was made without traverse to prosecute the invention of group I, claims 14-15, 20-25, 31 and 37. Applicants affirm the provisional election to prosecute claims 14-15, 20-25, 31 and 37. As understood during the telephone interview, some or all of the currently withdrawn claims may be considered and examined in this application depending upon allowance of a generic claim.

**II. Rejection of Claims 14, 15, 20-25, 31 and 37 Under 35 U.S.C. 103(a)**

Claims 14, 15, 20-25, 31 and 37 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over PCT No. WO 99/52654 to Bergman et al. (Bergman). Applicants transverse.

Applicants note that Bergman does not appear to qualify as prior art to support a rejection of the claims under § 103(a). A patent or publication used to support an obviousness rejection under § 103(a) must first qualify as prior art under § 102. See MPEP § 2141.01 (citing Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568 (Fed. Cir. 1987)).

First, the present application claims a priority date of May 27, 1999. This is the filing date of U.S. Patent Application No. 09/321,518, which is the parent application of the present (divisional) application. The Bergman application, on the other hand, was published on October 21, 1999, *after* the priority date of the present application. Accordingly, Bergman does not qualify as a printed publication under § 102(a) or (b). In addition, Bergman is an international *application*, and there is no indication that it has issued as a *patent* in the U.S. or any other country. Thus, Bergman does not qualify as a patent under § 102(a), (b), (d) or (e). Further, there is no indication that the alleged invention disclosed in the Bergman foreign publication was known or used by others in this country before applicants' invention for the purposes of § 102(a). The mere existence of some pending U.S. patent applications without disclosure of the contents of those applications is not sufficient to support a prima facie 102(a) rejection. Similarly, there is no evidence that the alleged Bergman invention was in public use or on sale more than a year before the filing date of the present invention so as to satisfy § 102(b).

Moreover, it does not appear that Bergman qualifies as prior art under § 102(e). As already mentioned, there is no indication that a patent has been granted on the Bergman foreign application, as required under § 102(e). The Bergman reference cited by the Examiner is merely a published PCT application, not a patent. Further, there is no evidence that the Bergman application fulfilled the requirements of paragraphs (1), (2), and (4) of 35 U.S.C. 371(c), before the invention thereof by the applicant. The PCT application WO 99/52654 to Bergman et al. does not support this contention. In addition, Applicants point out that the newly enacted version of § 102(e) does not provide a different result. Under amended § 102(e), an international application's § 102(e) date is the date the application was published if the application specifies the U.S. as a country in which patent protection is sought. As

explained above, the priority date of the present application predates the publication date of Bergman.<sup>1</sup> Therefore, Bergman is not prior art under § 102(e).

The remaining provisions of § 102 (102(c), (f) and (g)) are not relevant and will not be discussed here.

Finally, even if, for the sake of argument, Bergman did qualify as prior art under § 102, *which it does not*, Bergman neither teaches nor suggests applicants' claimed methods so as to render the claims obvious under § 103(a).

For example, the methods recited in claims 14 and 37 include vaporizing a liquid solvent and condensing that solvent on the surface of a wafer. Bergman, on the other hand, does not teach or suggest vaporizing a liquid solvent and condensing the solvent on the surface of a wafer.

In referring to claim 1 of Bergman, the Examiner contends that "it is inherent that upon condensation of the heated liquid a liquid layer will be placed on the surface of the wafer." Applicants disagree. Bergman discloses an apparatus and method for forming a liquid layer on the surface of a workpiece by *spraying* the liquid into a process chamber, not *vaporizing* the liquid solvent. Because the liquid is not vaporized, as is recited in claims 14 and 37 of the present application, the liquid is not later "condensed." Accordingly, Bergman neither teaches nor suggests vaporizing a liquid solvent *and* condensing the solvent on the surface of a wafer, as recited in the present application.

Although Fig. 5 of Bergman, which is pointed out by the Examiner, discloses a steam generator for supplying saturated steam to the process chamber, there is no indication that a liquid layer is formed on the surface of the workpiece. Condensing a vapor can be achieved by either increasing the pressure and/or decreasing the temperature, e.g., cooling the wafer. In Fig. 5 of Bergman, there is no teaching or suggestion to increase the pressure within the chamber or to cool the workpiece so as to form a liquid layer on the surface of the workpiece. Bergman actually teaches away from forming such a layer by specifically teaching *heating* the workpiece with steam to accelerate reaction kinetics (see p. 26, 21-24). Accordingly, Bergman neither teaches nor suggests forming a film or thin layer of solvent on the surface of a wafer, as recited in the present application.

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<sup>1</sup> Amended § 102(e) applies only to international applications filed on or after November 29, 2000, which is after the international filing date of Bergman (April 16, 1999). Thus, only the previous version of § 102(e) applies with respect to the Bergman reference.

**III. Conclusion**

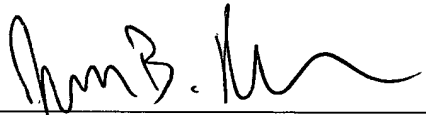
In view of the foregoing, the claims of the present application are allowable and early notification to that effect is respectfully requested.

If the Examiner has any questions, or believes that a telephone conversation would expedite prosecution of this application, he is requested to contact the undersigned.

Respectfully submitted,

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